GPON ONU BOSA 1.25G 1310nmTX/2.5G 1490RX

Features:

- Coaxial Package
- InGaAsP/InP MQW-DFB Laser Diode
- Low threshold, high slope efficiency and high output power
- Operating Case Temperature: -40℃ to +85℃
- Single-mode fiber pigtailed with SC FC ST or LC connector
- High channel isolation
- Low return loss
- Optional with Isolator

Applications:

- GPON ONU side
- Long distance digital transmission system
- Cable television system
- WDM systems

Absolute Maximum Ratings:

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Tstg	-40	100	℃
Operating Case Temperature	Topr	-40	85	℃
Reverse Voltage (LD)	V_{RL}	---	2	V
Reverse Voltage (PD)	V_{RD}	---	20	V
Photodiode Forward Current (PD)	I_{FD}	---	2	mA
Forward Current(LD)	I_{FL}	---	150	mA
Lead Soldering (Temperature)/(Time)	---	---	260/10	℃/Sec

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1.25G Transmitter Specifications:

Unless specified else, the specifications below are defined at TC=25±3℃

Description	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	Ith	---	6	15	mA	at Tc=25℃
Output Optical Power	Po	1.8		3.5	mW	CW, Iop=Ith+20mA,
		1.0	---	---		CW, Iop=Ith+20mA, Tc=85℃
Peak Wavelength	λ	1290	1310	1330	nm	CW, Iop=Ith+20mA, Tc=-40~85℃
Operating Voltage	Vop	---	1.1	1.5	V	at Tc=25℃
Side-mode Suppression Ratio	SMSR	35	40	---	dB	CW, Iop=Ith+20mA, Tc=-40~85℃
Tracking error	TE	-1.5	---	1.5	dB	APC, -40℃/+25℃, +25℃/+85℃
Monitor Current	Imon	0.2	0.5	2.0	mA	CW, Iop=Ith+20mA,
Monitor Dark Current	Id	---	---	0.1	μA	VRD=5V
Rise/Fall Time	Tr/Tf	---	0.1	0.2	ns	20%~80%

2.5G Receiver Specifications:

Unless specified else, the specifications below are defined at TC=25±3℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating Wavelength	λ	1480	1490	1500	nm	---
Voltage	Vcc	3.0	3.3	3.6	V	---
Supply Current	Icc		20	25	mA	---
APD Breakdown Voltage	Vbr	35	42	55	V	---
Overload	Pin	-8			dBm	---
Sensitivity	Sen	---	---	-31	dBm	BER=10^{-10}@2.5G PRBS2^{23}-1
Optical Isolation from External Source	ISO1	25	---	---	dB	λ=1441~1450nm λ=1530~1539nm
	ISO2	35	---	---	dB	λ=1260~1440nm λ=1540~1625nm
Optical Return Loss	RL	12	---	---	dB	λ=1310nm
		20	---	---	dB	λ=1490nm
Optical Crosstalk from Internal Laser	Xopt	---	---	-40	dB	---

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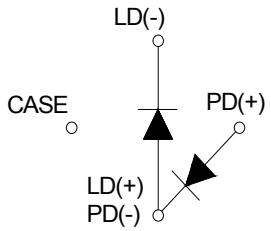
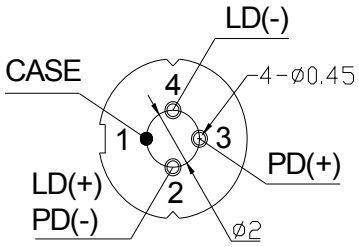
Pin Assignment:

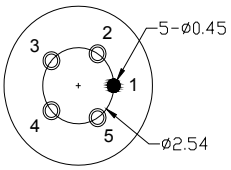
TYPE: 2

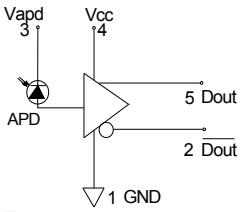




LD-pin-2 / TYPE: B

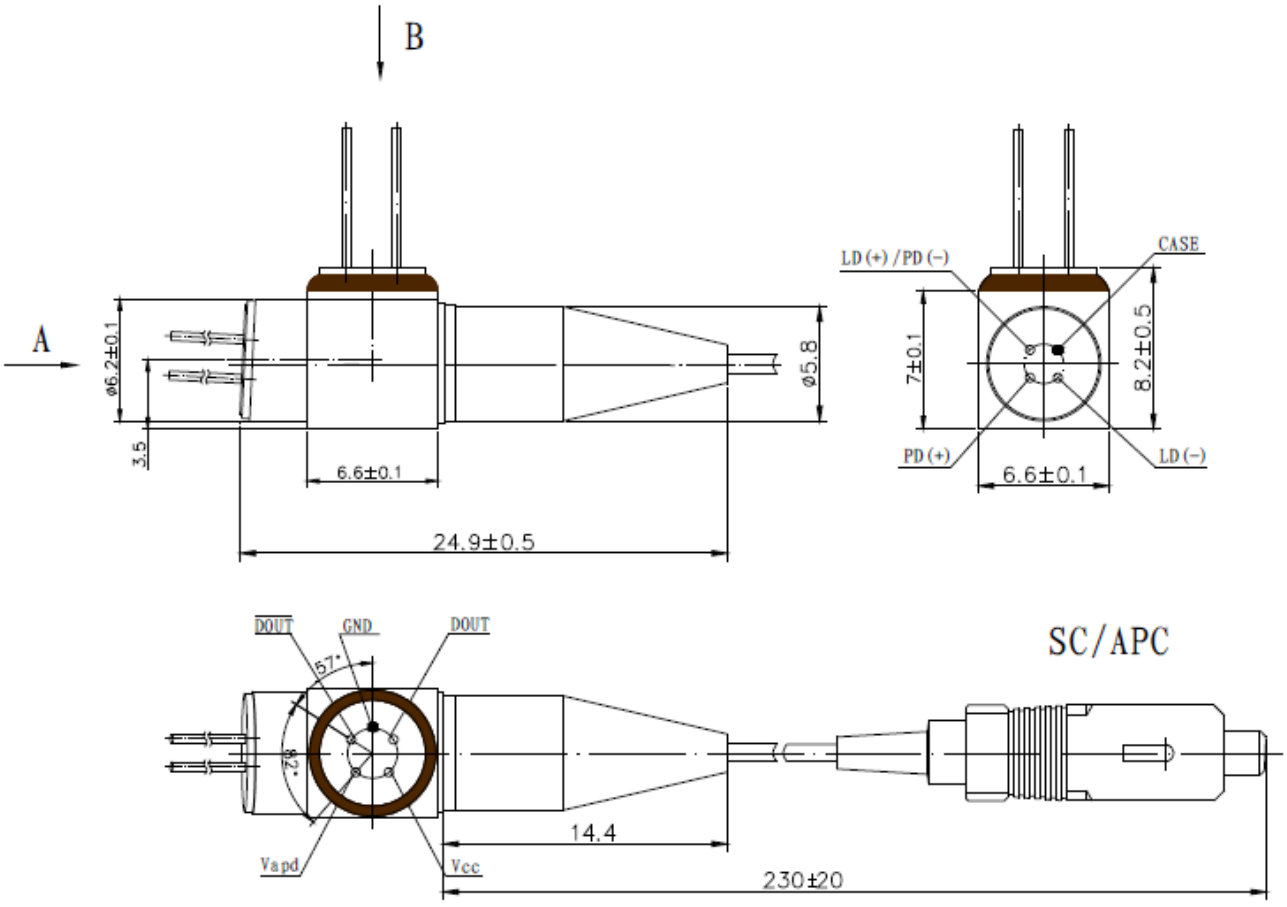
TYPE: F





APD-pin-F

Pigtail Package Series:



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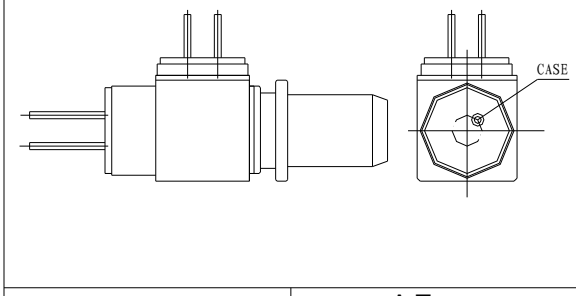
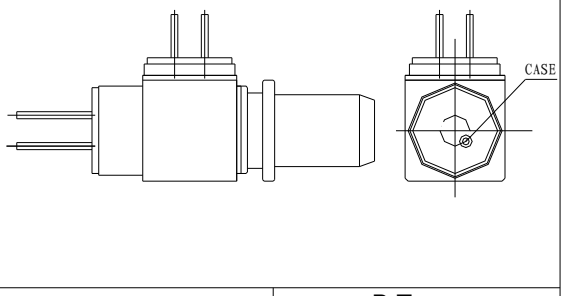
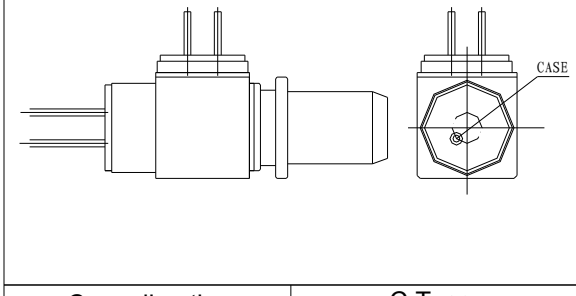
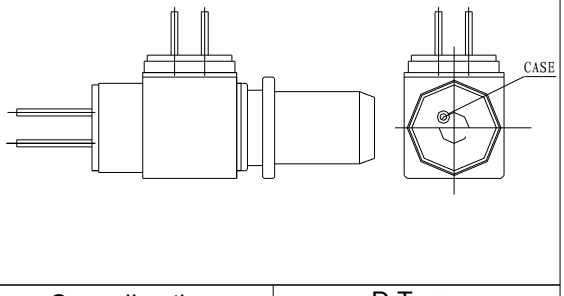
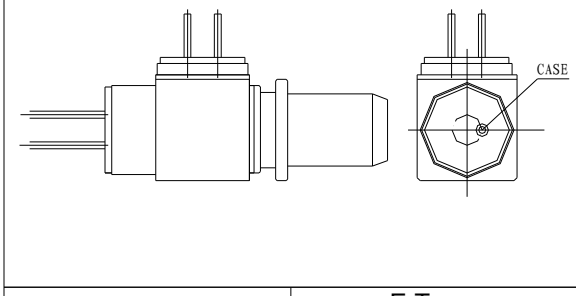
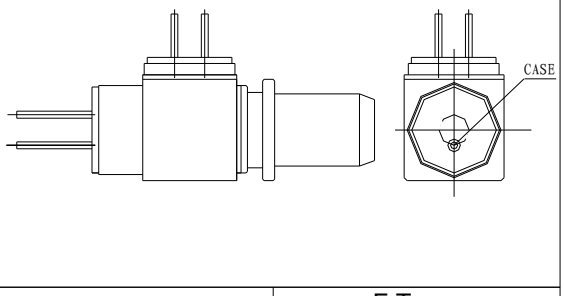
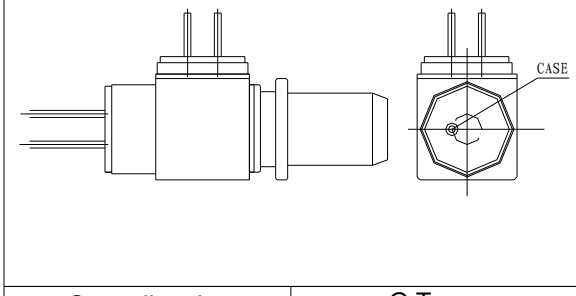
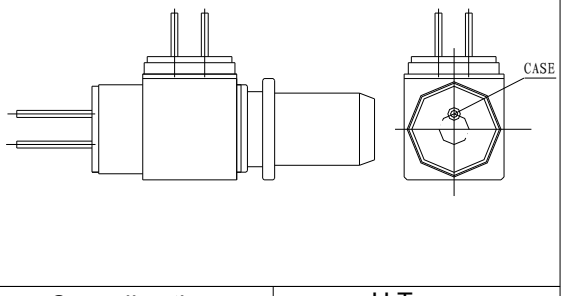
TX Pin Order Code*Note1、2、3

Launch			
			
Case direction	A Type	Case direction	B Type
			
Case direction	C Type	Case direction	D Type
			
Case direction	E Type	Case direction	F Type
			
Case direction	G Type	Case direction	H Type

Note1、This picture is for pluggable, pigtail BIDI chip PIN package direction's reference.

Note2、This picture is suitable for RX Pin direction comparison .

Note3、The package direction is described as "×-×" For example "A-B", "A" is TX chip Pin direction, "B" is RX chip Pin direction.

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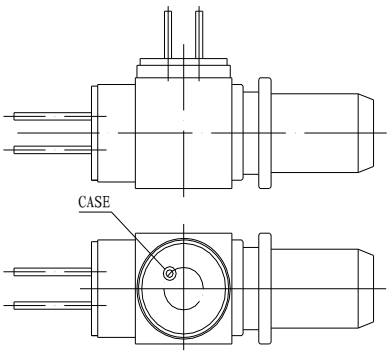
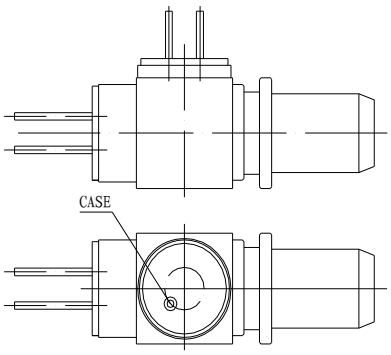
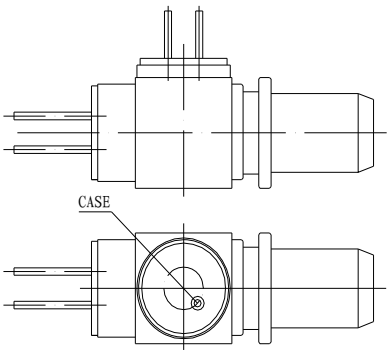
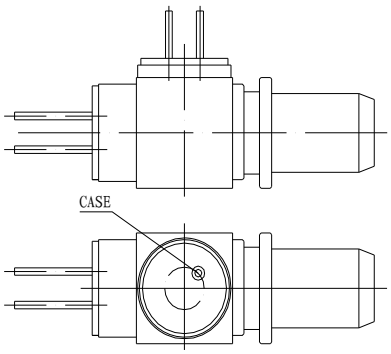
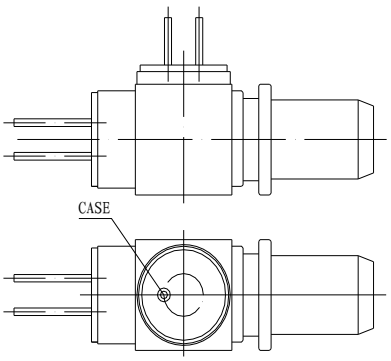
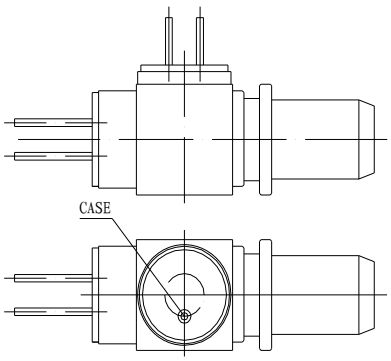
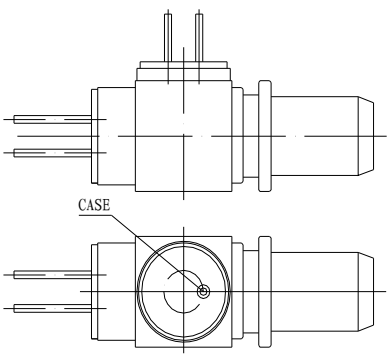
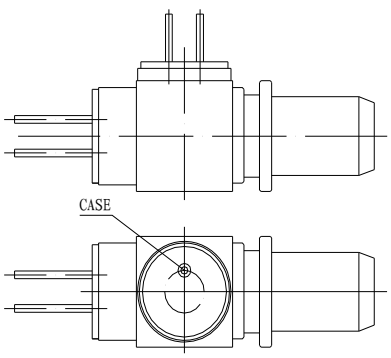
RX Pin Order Code:

Receive	
	
Case direction A Type	Case direction B Type
	
Case direction C Type	Case direction D Type
	
Case direction E Type	Case direction F Type
	
Case direction G Type	Case direction H Type

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Nomenclature:

HEBIDI- □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

A B C D E F G H I J K L M N O

Code	Parameter	Detailed Description							
A	Laser Type	BLANK=FP LD				D=DFB LD			
B	Launch Wavelength	3=1310nm							
C	Launch Data Rate	1=1.25G				2=2.5G			
D	Output Power	15=1~1.59mW		25=1.6~2.99mW		35=3~5		XX=Custom	
E	TX Pin Type	1=LD-pin-1				Blank=LD-pin-2			
F	Receiver Wavelength	L=1490nm							
G	Receiver Data Rate	7=1.25G				9=2.5G			
H	Receiver Voltage	3=3V							
I	RX Pin Type	F= pin-F							
J	Connector	F=FC/PC		S= SC/PC		T=ST/PC		N =None	
		FA=FC/APC			SA= SC/APC			L=LC/PC	
K	TX Pin Package Direction	A	B	C	D	E	F	G	H
L	TX Pin Package Direction	A	B	C	D	E	F	G	H
M	RX TO Insulated With Shell	Blank=NO Insulation				J=Insulation			
N	Isolator	Blank=None				G=with Ⅰ			
O	Fibre length	Blank=50cm		035=35cm		100=100cm		XXX=Custom	

Precaution:

(1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.

(2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.

(3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

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